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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,739	09/28/2001	Woong Kwon Kim	043694-5015-03	2171

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EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 08/27/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/964,739	Applicant(s) KIM, WOONG KWON	
	Examiner Sow-Fun Hon	Art Unit 1772	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-17 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Rejections Withdrawn

1. The 35 U.S.C. 112,2nd paragraph rejection in Paper # 4 (mailed 03/18/02) of claims 1, 3-8 over the term "thin" has been withdrawn due to Applicant's amendment in Paper # 6 (filed 06/18/02).
2. The 35 U.S.C. 112,2nd paragraph rejection in Paper # 4 (mailed 03/18/02) of claims 7, 15 over the limitation of "several and several ten cp" has been withdrawn due to Applicant's affirmation of the validity of the broad interpretation of the claim limitation to mean a range of 1 to 100 cp in Paper # 6 (filed 06/18/02).
3. The 35 U.S.C. 112,2nd paragraph rejection in Paper # 4 (mailed 03/18/02) of claims 1,3,5,8-9,1,13,16 has been withdrawn due to Applicant's affirmation of the validity of the broad interpretation of the claim limitation to mean protection from everything undesirable in Paper # 6 (filed 06/18/02).

Rejections Repeated

4. The 35 U.S.C. 112,2nd paragraph rejection of claims 4, 12 over the term "compressive stress" has been repeated for the same reasons previously of record in Paper # 4 (mailed 03/18/02).
5. The 35 U.S.C. 112,2nd paragraph rejection of claims 7, 15 over whether the viscosity coefficient of the thermosetting resin is before thermoset has been repeated for the same reasons

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previously of record in Paper # 4 (mailed 03/18/02). Applicant has failed to address this aspect of the rejection.

New Rejections

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant is respectfully requested to indicate support for the new limitation of between seven cp and approximately seventy cp in the specification.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1, 3-9, 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margalit et al. (US 5,606,438) in view of Nakazawa et al. (US 5,260,174).

Margalit et al. has a protected (ruggedized) liquid crystal display with a layer of protective transparent plastic material such as acrylic (thermoset) plastic on the outer surface of each glass substrate (front and back layers of plastic material between which the LCD sandwich

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is mounted). Margalit et al. also teaches that the protective transparent layer can be inorganic (glass)(column 1, lines 45-65 and column 2, lines 10-20). The inorganic glass layer has a compressive stress since it Margalit et al. does not teach that it has been annealed to relieve the stresses in the glass. When the protective glass layer is adhered to the glass substrate with an organic adhesive such as an acrylic resin adhesive, the claim limitation of “the protective layer includes one inorganic layer and one organic layer” is met since the acrylic resin layer also has protective functions as well as adhesive ones.

Margalit et al., however, fails to teach that the transparent protective layer is formed on the outer surface of the substrate instead of adhered to with an adhesive.

Nakazawa et al. has a method of forming films on glass substrates via spin coating of a viscous liquid (column 1, lines 10-35) of an aqueous solution of a thermosetting acrylic resin (column 6, lines 30-50) which would have a viscosity coefficient of between approximately several cp to approximately several ten cp. Nakazawa et al. teaches that this method provides a plastic layer of uniform thickness on a surface of an object having a comparatively large surface area by using a minimum amount of the liquid (column 2, lines 15-20). It would have been obvious to one of ordinary skill in the art to have used a solution of glass (silica sol gel) in place of the acrylic plastic solution in order to obtain a glass protective layer instead of a plastic one.

Because Nakazawa et al. teaches that this method provides a layer of uniform thickness on a surface of an object having a comparatively large surface area by using a minimum amount of the liquid, it would have been obvious to one of ordinary skill in the art to have used the method of Nakazawa et al. to form the protective layer on the outer surfaces of the glass

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substrates of the invention of Margalit et al. in order to obtain a protected LCD with protective transparent layers formed directly on the outer surfaces of the LCD glass substrates.

Response to Arguments

11. Applicant's arguments with respect to the claim rejections using Yamaji et al. have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's argument with respect to the 35 U.S.C. 112, 2nd paragraph rejection of claims 4, 12 over the term "compressive stress" has been fully considered but deemed unpersuasive. The portion of the specification indicated by Applicant (page 6, lines 19-22) does not explain or define what the "compressive stress" is.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH
08/20/02


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772 8/26/02